

ABSTRACT OF THE INVENTION

The present invention discloses a mask for reducing the proximity effect. The mask comprises a plurality of line-shaped features, a plurality of first assist features positioned between the line-shaped features and a plurality of second assist features positioned between the line-shaped feature and the first assist feature. The line-shaped feature corresponds to isolation trenches to be formed on a silicon wafer. The first assist feature is rectangular in shape and has a larger width at the direction perpendicular to the line-shaped features. The width of the second assist feature is smaller than two-fifths of the wavelength but larger than one-fourth of the wavelength of an exposure source. The size of the first assist feature and the second assist feature is so designed to be non-resolvable, while the line-shaped feature is resolvable and transferred to the silicon wafer.